

Minireview Article

Optimizing Patient Outcomes: The Role of Medication Administration and Nursing Care" A Mini-review

ABSTRACT

(Dalton and Byrne 2017)By synthesizing the literature and existing research, we explore the key factors of medication management and care and the need to implement relevant strategies. The findings and findings of this study suggest that optimizing patient outcomes requires enhancing the safety and efficacy of drug management, improving the professionalism of care teams, and enhancing collaboration and communication between teams. In summary, the synergy of medication management and care is a key element in optimizing patient outcomes

introduction

(Brummel, Lustig et al. 2014) Medication management involves properly administering and monitoring the safety and efficacy of medications, while nursing is responsible for providing comprehensive care and focusing on the overall health of patients. Therefore, we conducted this study to assess the role of medication management and care in optimizing patient outcomes.

method

(Gleeson, Calderon et al. 2016) Through the analysis and synthesis of selected literature, we reached key findings and conclusions

Results and findings

(Bourbeau and Bartlett 2008) Care teams play a key role in monitoring and evaluating patients' condition, providing personalized care and education, and promoting patient health and recovery. (Bacci, Coley et al. 2016)

conclusion

This study highlights the importance of medication management and care in optimizing patient outcomes. To

achieve good patient outcomes, healthcare facilities and care teams should enhance the safety and efficacy of medication administration, improve medication education and adherence support, and enhance collaboration between care teams and other healthcare professionals. These efforts will help improve patient satisfaction, reduce complication rates, and provide better patient care and treatment outcomes.

Keywords: medication management, nursing, patient outcomes, optimization

1. INTRODUCTION

The goal of medication management is to ensure that patients receive medication correctly and to avoid drug misuse and adverse reactions. Drug management includes proper prescribing, accurate drug dosing, correct route and timing of administration, and monitoring and evaluation of drug treatment effects and adverse effects. Good medication management practices can improve medication adherence and ensure that patients receive appropriate treatment, thereby optimizing patient outcomes.

● **Assurance of treatment outcomes:** Good medication management helps ensure that patients receive the right treatment. With accurate prescription and medication dosing, patients can access appropriate medications.

Proper medication use can help control disease progression and maximize treatment outcomes. Conversely, improper administration of medications can lead to misuse, misdosing, or negligence that can reduce treatment effectiveness or trigger adverse effects. According to the World Health Organization (WHO), drug-induced adverse reactions are one of the leading causes of medical malpractice and adverse outcomes. By emphasizing proper medication management and care practices, the incidence of adverse drug reactions can be reduced, thereby improving patient safety and treatment outcomes.

● **Reduction of adverse reactions and drug interactions:** One of the core goals of drug management is to reduce the occurrence of adverse reactions. By carefully monitoring a patient's medication use, medical professionals are able to recognize signs of adverse reactions in a timely manner and take appropriate interventions. In addition, drug management involves assessing and monitoring interactions between drugs to avoid potential adverse effects and inappropriate drug combinations.

● **Improved medication adherence:** (Varshney 2013) Medication adherence refers to the degree to which a patient is using medication correctly as prescribed. With clear medication information and guidance, patients are

able to better understand what the drug is for, what dose and how it is used, thereby increasing their willingness and ability to use the medication correctly. Good medication adherence is one of the most important factors in treatment success.

● **Prevention of drug misuse:** (Lingford-Hughes, Welch et al. 2012). Drug misuse includes drug overdose, missed doses, wrong routes or times of administration, etc. These errors can lead to serious consequences, such as drug poisoning or treatment failure. With proper medication dosing and dosing guidance, medical professionals can help patients avoid the risk of drug misuse and improve patient safety.

● **Drug monitoring and evaluation:** (Scullin, Scott et al. 2007) By regularly examining and monitoring a patient's medication use, medical professionals are able to assess the effectiveness of treatment, the need to adjust the dose of the drug, and the risk of adverse effects. This monitoring and evaluation helps to detect potential problems early and take appropriate measures to ensure patient safety and treatment outcomes.

Nursing plays an important role in optimizing patient outcomes. (Hristoskova, Sakkalis et al. 2014) Caregivers are

able to identify patients' needs and provide psychological support, education, and guidance to help patients better understand and manage their illness. Nursing also includes medication education to improve patient understanding and adherence to medications.

Caregivers are responsible for monitoring and evaluating the patient's physical condition, vital signs, and changes in condition. They provide basic care such as measuring blood pressure, monitoring body temperature and heart rate, and ensuring that patients' basic living needs are met. (Dolu, Naharcı et al. 2021) **Promote patient safety and recovery** Caregivers play a key role in keeping patients safe. (Organization 2002) Caregivers are also responsible for preventing and controlling infections, preventing falls and other accidents, and providing the support and education patients need to recover.

Medication management and care are interdependent and collectively influence patient outcomes. (Scullin, Scott et al. 2007) At the same time, nursing staff need to understand and master the safe use and adverse reactions of

drugs so that they can detect and deal with patients' drug-related problems in a timely manner. (Li, Liu et al. 2021)Such systems can improve the accuracy and accessibility of medical data, reducing errors and loss of paper records. Through electronic health record systems, doctors and nurses can better track patients' medical records, diagnoses, and treatment information, improving the accuracy and efficiency of medical decisions, thereby optimizing patient outcomes.

(Johansson, Oleni et al. 2002)By providing personalized care, positive communication, and care, patients can increase their trust in the medical team and treatment plan and increase their satisfaction throughout the treatment process

To achieve optimized patient outcomes, healthcare organizations and care teams should adopt a range of strategies. (Gogtay, Bhatt et al. 2002)Second, the care team should continuously improve their professionalism and stay up-to-date with the latest drug knowledge and practice guidelines in order to be able to provide high-quality care. (Mitchell, Wynia et al. 2012)

For example, China is facing the challenge of epidemics of chronic diseases, such as diabetes and hypertension. In order to optimize the management of patients' condition and treatment outcomes, China has implemented many chronic disease management programs. Through a combination of regular follow-up, health education, lifestyle interventions, and medication management, these programs help patients master their own condition and management methods, improve disease control and prevent complications, and improve patients' quality of life

In oncology treatment, medication management and care can help patients cope with the adverse effects of chemotherapy, provide support and education to improve patient adherence to treatment, and reduce unnecessary interruptions or drug dose adjustments to maximize treatment outcomes.

2. METHOD

A web search was conducted using the search terms "midwives child health, Africa responsibilities" in Google Scholar and PubMed databases. The search terms used were "Drug management", 'care, patient outcomes',

‘optimization ’ The search was limited to full text articles published in the English language between 2010 and 2022 The search yielded a total of 3000 articles, and after screening the titles and abstracts, 15 full-text articles were used to inform this mini-review using a thematic approach

Inclusion: All national working papers or policy or local studies that enumerated or highlighted China's role or responsibility in optimizing patient management were selected.

Exclusion Criteria: Studies or policy documents conducted outside of China that are not relevant to the role or responsibility of patient optimization

3. RESULT

(Hales and Pronovost 2006) Effective drug management includes correct drug selection, dose calculation, and route of administration. By using medications correctly and following best dosing practices, the risk of drug-related errors and complications can be reduced.(De Hert, Cohen et al. 2011)Their clinical judgment and observation skills help to detect and correct patient discomfort and problems in a timely manner. The care team plays an important role in medication education and adherence support. By providing patients with information

about proper use of medications, side effects, and drug interactions, caregivers are able to help patients better understand and adhere to drug treatment plans.(Lee, Bamford et al. 2017) Effective communication and collaboration between doctors, pharmacists and other care professionals can ensure the right medication selection and adjustment to maximize patient outcomes.

4. DISCUSSION

In this study, we explore the importance and role of medication management and care in optimizing patient outcomes. (Shaneyfelt, Mayo-Smith et al. 1999).

(Ma 2014). Rational drug management can reduce drug misuse and adverse reactions, and ensure that patients receive appropriate treatment results. By following best practice guidelines and standardized drug stewardship processes, healthcare organizations can reduce patient risk and improve treatment outcomes.

Second, nursing plays a key role in medication management. The care team plays a vital role in the medication administration and monitoring process. They are responsible for the proper administration of medications, monitoring patient responses and adverse events, and providing education and support.(Given, Given et al.

2001)In addition, care teams are able to provide personalized care and education to improve medication adherence and outcomes

Further discussion, (Cushing and Metcalfe 2007) Drug administration involves the collaboration of multiple medical professionals, including doctors, pharmacists, nurses, and others. Collaboration and good communication are key factors in ensuring patient safety and good treatment outcomes. Healthcare organizations should establish cross-professional teams that facilitate information sharing, collaborative decision-making, and effective communication processes. (Kripalani, Jackson et al. 2007).

However, to optimize patient outcomes, medication management and care face several challenges and barriers. One of them is the issue of human resources and training. Healthcare facilities need to have a sufficient number of qualified nursing staff and provide ongoing professional training to ensure they have good medication management skills and knowledge. In addition, (Wager, Lee et al. 2021).

REVIEW

Table 1. Drug management and nursing practices of the First Affiliated Hospital

<p>Impact of medication administration on patient outcomes:</p>	<p>Reduction in drug misuse and adverse reactions:1. Drug validation and reconciliation 2. Labels and descriptions</p> <p>Improved medication adherence and treatment effectiveness:1.Support and return visits 2.Regular review and monitoring</p> <p>Promotes patient recovery and health outcomes:1.Patient education and self-management 2. Integration of rehabilitation programs</p>
<p>The role of care teams in optimizing patient outcomes</p>	<ul style="list-style-type: none"> ◇Regularly measure and record the patient's vital signs, such as temperature, pulse, respiratory rate, and blood pressure. ◇Observe changes in the patient's symptoms and signs and record the relevant information ◇Work with the patient to set goals, ◇Provide support for behaviour change and self-management ◇Provide education and guidance to patients and families about medications
<p>Important medication management and care factors</p>	<ul style="list-style-type: none"> ◇Safety measures and strategies for drug administration, such as drug validation, labeling, and record correctness. ◇Methods of medication education and adherence support, such as patient education materials and individualized rehabilitation programs. ◇Collaboration and communication between the care team and other medical professionals.

Investigate the drug management and nursing practices of the First Affiliated Hospital of Henan University of Science and Technology

In the First Affiliated Hospital of Henan University of Science and Technology, in order to improve drug management and nursing practices, they decided to implement an electronic drug management system abbreviation (eMAR). The following are the specific measures taken and the results achieved in this practical case:

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Specific measures:

Training: Healthcare organizations provide detailed training for healthcare workers, including the operation of the system, changes to medication administration processes, and interaction with electronic systems.

System customization: The eMAR system is customized to suit the specific needs of the healthcare organization, including drug lists, dose calculations, and input of patient information.

Information technology support: set up a special information technology support team, responsible for the daily maintenance and problem solving of the system, to ensure the stability and reliability of the system.

Policy development: Policies and norms are in place, defining responsibilities and procedures for medication management and care, and ensuring that each healthcare worker adheres to standard operating procedures

Results achieved:

Reduce drug errors: The eMAR system provides real-time drug information, including drug name, dose, frequency, and special considerations, reducing the occurrence of adverse events due to drug errors.

Improve medication adherence: The system's reminder function ensures that medications are delivered on time, helping to improve patient medication adherence and treatment outcomes.

Facilitate communication and collaboration: Through the system's sharing function, medical staff can share patients' medication information in real time, facilitating communication and collaboration between teams and

ensuring continuous quality of care.

Data analysis and monitoring: The eMAR system provides data analysis and reporting capabilities that allow

healthcare organizations to periodically evaluate the performance of medication management and care, and make improvements and adjustments based on the results

Explore the key factors for implementing medication management and care improvement strategies:

Training: Provide adequate training for healthcare workers to ensure they are familiar with the operations and procedures of the new system.
Resource input: Allocate sufficient resources, including financial, technical and human resources, to support the implementation and maintenance of the system.

Policy development: Establish clear policies and norms to ensure that healthcare workers follow standard operating procedures during implementation.

Continuous monitoring and improvement: Establish an evaluation mechanism to regularly monitor the use and effectiveness of the system, and make improvements and adjustments based on the feedback results.

5. CONCLUSION

This mini-review emphasize the importance of medication management and care in optimizing patient outcomes.

To achieve good patient outcomes, drug administrators should follow the correct route of drug administration,

dose, and timing to ensure that patients receive safe and effective treatment. (Coté, Notterman et al. 2000) Attentiveness and attention from the care team can improve medication adherence in patients. By providing medication education, answering questions, and providing support, nurses can help patients properly understand and adhere to medication regimens. (Garrino, Curto et al. 2011) Nurses should build trusting relationships with patients and provide individualized support and education to promote patient participation in treatment and self-management skills. Good medication management and collaboration with care teams are essential to optimize patient outcomes. (Mitchell, Wynia et al. 2012) These efforts will help improve patient satisfaction, reduce complication rates, and provide better patient care and treatment outcomes.

CONSENT AND ETHICAL APPROVAL

It is not applicable.

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